

**HUBUNGAN AMALAN PENGURUSAN KUALITI MENYELURUH  
DENGAN TAHAP PEMINDAHAN TEKNOLOGI: SUATU KAJIAN  
EMPIRIKAL MENGIKUT PERSPEKTIF PENYELIDIK UNIVERSITI**

**AHMAD BIN JUSOH**

**Diserahkan kepada Kolej Perniagaan  
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Ijazah Doktor Falsafah  
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## **PENGAKUAN**

“Saya akui karya ini adalah hasil saya sendiri kecuali nukilan dan ringkasan yang tiap-tiap satunya telah saya jelaskan sumbernya.”

7 Ogos 2008

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**Penolong Naib Canselor  
Kolej Perniagaan  
Universiti Utara Malaysia  
06010 UUM Sintok  
Kedah Darul Aman**

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## ABSTRAK

Amalan Pengurusan Kualiti Menyeluruh (PKM) biasanya mempunyai perkaitan positif dengan prestasi organisasi terutamanya yang berteraskan perniagaan dalam sektor pembuatan dan perkhidmatan. Walaupun PKM secara umumnya merupakan strategi pengurusan yang berjaya bagi organisasi berorientasi komersial namun peranannya dalam sektor awam terutamanya dalam sektor pendidikan masih dianggap kontroversi. Didapati hanya terdapat sedikit kajian empirikal yang menyokong pelaksanaan PKM di sektor pendidikan. Di samping itu kebanyakan kajian PKM yang ada banyak memfokuskan kepada bidang pentadbiran dan pengajaran. Lantas usaha untuk memperolehi kajian-kajian yang membincangkan amalan-amalan PKM dalam skop pengurusan penyelidikan dan pembangunan di institusi pengajian tinggi juga agak sukar kerana kekurangan literatur atau kajian terdahulu yang berkaitan. Maka keadaan ini telah memperlihatkan wujudnya keperluan dan ruang yang besar untuk mengkaji amalan PKM dalam persekitaran penyelidikan dan pembangunan (P&P) di institusi pengajian tinggi. Aktiviti penyelidikan yang dapat diurus dengan baik akan dapat meningkatkan pencapaian penyelidikan dari segi tahap pemindahan teknologi. Keperluan untuk melakukan kajian semakin penting apabila keadaan semasa di universiti awam memperlihatkan tahap pemindahan teknologi yang rendah. Justeru itu kajian ini cuba memahami fenomena ini mengikut kerangka atau model PKM yang disesuaikan mengikut konteks pengurusan penyelidikan dan pembangunan. Secara khususnya kajian ini telah membuktikan terdapatnya hubungan antara amalan-amalan PKM dengan tahap pemindahan teknologi. Konsep amalan PKM dijelaskan melalui tujuh konstruk iaitu kepimpinan, perancangan strategik fokus pelanggan, pengurusan data dan maklumat, pengurusan manusia, pengurusan proses dan sistem, dan rakan strategik dan sumber. Manakala petunjuk tahap pemindahan teknologi pula merangkumi penerbitan, seminar, perundingan, pendedahan rekaan, pematenan, pelesenan, royalti dan penubuhan syarikat baru. Dari segi metodologi, para penyelidik universiti di empat buah universiti penyelidikan telah dijadikan unit analisis kajian. Manakala prosedur persampelan rawak berstrata telah digunakan. Seterusnya bagi instrumen kajian, borang soal selidik telah digunakan dan dalam kerja lapangan yang dilakukan ia telah berjaya mencapai kadar pulangan yang tinggi. Bagi meningkatkan tahap keesahan instrumen beberapa prosedur penting telah dilakukan seperti penilaian pendapat pakar, ujian rintis dan analisis faktor. Ujian kebolehpercayaan yang dilakukan menunjukkan instrumen kajian mempunyai darjah kebolehpercayaan yang tinggi. Dalam proses pembuktian hipotesis utama analisis korelasi dan regresi berganda hirarki telah dilakukan dengan mengambilkira faktor personal sebagai pembolehubah kawalan. Dapatan kajian menunjukkan bahawa terdapat sedikit perubahan konstruk PKM. Dari segi impak amalan-amalan PKM terhadap tahap pemindahan teknologi, kajian ini berjaya membuktikan terdapat hubungan yang signifikan walaupun ianya agak lemah. Sebagai kesimpulan dapatan kajian ini telah menyumbang kepada peningkatan kefahaman terhadap subjek utama kajian dan yang lebih penting lagi ia turut menyumbang kepada perkembangan dan pengukuhan teori dalam pengurusan kualiti.

## **ABSTRACT**

Total Quality Management (TQM) practices have been positively associated with organizational performance particularly for business-oriented organization in the manufacturing and service sectors. While TQM as a successful managerial strategy is generally accepted in commercial organizations, its role in public sector especially in higher education institution is still controversial. Only a few empirical studies exist to support the implementation of TQM in higher education institution. Besides, previous studies have shown that the TQM practices adapted in higher education institution are predominantly in administrative areas and teaching activities only. Accordingly it is too hard to find any TQM literatures focussing and discussing on the issues of research and development (R&D) management in higher education setting. Therefore there is a big gap in the TQM literature that has to be filled and a new framework of TQM is called for, along with the modification of the TQM practices for a unique culture of research. In addition, having a good practice of research management in higher education institution is really critical since it will affects the research performance such as the level of technology transfer. Looking at the current phenomenon of technology transfer in higher education institution, there is a need and the justification for doing a research is to understand how TQM practices in R&D management would explain the level of technology transfer. This study is able to prove that there is a positive impact of TQM practices on the level of technology transfer. There are seven constructs in measuring TQM practices i.e. leadership, strategic planning, customer focus, data and information management, people management, process and system management, and partnership and resources. While the indicators of technology transfer are ranging from publication, seminar, consultation, invention disclosure, patenting, licensing, royalties and spin-off company. This study used academic researchers from four research universities as the unit of analysis and had employed stratified sampling technique in the data collection procedure. The instrument used in the data collection process is a set of questionnaire which recorded a high response rate. The instrument had been validated using certain procedure such as expert opinion assessment, pilot test and factor analysis. It also has a higher degree of reliability. The factor analysis was carried out and Hierarchical Multiple Regression analysis that takes into account the personal factor was used to test the main hypothesis of the study. The analyses revealed that there are some modifications on the original construct of TQM and there is a positive significant relationship between TQM practices and level of technology transfer. In conclusion the findings of the study have contributed to the enhancement of understanding on the subject matter and more importantly it also contribute to the development and affirmation of theories in the field of quality management.

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## DAFTAR SINGKATAN PERKATAAN

ASCI	American Customer Satisfaction Index
BEC	Baldrige Education Criteria
BEM	Business Excellence Model
CI	Condition Index
CIF	Community Innovation Fund
CIPA	Chartered Institute of Patent Attorneys
DRDF	Commercialization of R&D Fund
EFQM	European Foundation for Quality Management
EIF	Enterprise Innovation Fund
EOA	Expert Opinion Assessment
FP	Fokus Pelanggan
HETQMEX	Higher Education TQM Model of Excellence
ICT	Teknologi Komunikasi dan Maklumat
IGS	Industry R&D Grand Scheme
IPT	Institusi Pengajian Tinggi
IPTA	Institusi Pengajian Tinggi Awam
IRPA	Intensification of Research in Priority Area
ISO	The International Organization for Standardization
IT	Information Technology
JAJK	Kod Amalan Jaminan Kualiti
JUSE	Union of Japanese Scientist and Engineers
KMO	Kaise-Meyer-Olkin
KP	Kepimpinan
KPA	Kepimpinan Pengurusan Atasan
MASTIC	Malaysian Science and Technology Information Centre
MBNQA	Malcolm Baldrige National Quality Award
MD	Mahalanobis Distance
MNC	Multinational Corporation
MOSTI	Kementerian Sains, Teknologi dan Inovasi
MTSF	The Malaysian Toray Science Foundation
P&P	Pengajaran dan Pembelajaran
PCA	Principal Component Cnalysis



PDM	Pengurusan Data & Paklumat
PhD	Doktor Falsafah
PKM	Pengurusan Kualiti Menyeluruh
PM	Pengurusan Manusia
PP	Pengurusan Prestasi
PPS	Pengurusan Proses & Sistem
PPT	Pejabat Pemindahan Teknologi
PS	Perancangan Strategik
PSbr	Pengurusan Sumber
QCC	Kumpulan Kawalan Kualiti
R&D	Penyelidikan dan pembangunan
RBV	Resource-Based Theory
RMK7	Rancangan Malaysia Ketujuh
RMK8	Rancangan Malaysia Kelapan
RMK9	Rancangan Malaysia Kesembilan
RS	Rakan Strategik
RSS	Rakan Strategik dan Sumber
SAGA	Scientific Advancement and Fund Allocation
SERQUAL	Model Kualiti Perkhidmatan-
SPK	Sistem Pengurusan Kualiti
SPSS	Statistical Package for Sosial Science
TCSI	Technology Commercialization Success Index
TPT	Tahap Pemindahan Teknologi
TQC	Total Quality Control
TQM	Total Quality Management
UKM	Universiti Kebangsaan Malaysia
UM	Universiti Malaya
UNCTC	United Nation Centre on Transnational Corporation
UPM	Universiti Putra Malaysia
USM	Universiti Sains Malaysia
UTM	Universiti Teknologi Malaysia
VIF	Variance Inflation Factor

# **BAB 1**

## **PENGENALAN**

### **1.0 Pengenalan**

Amalan dan system pengurusan yang cemerlang umpamanya amalan Pengurusan Kualiti Menyeluruh (PKM) atau biasa juga dikenali dalam versi Inggerisnya sebagai *Total Quality Management* (TQM) secara umumnya dipercayai boleh membantu organisasi memiliki kelebihan bersaing dari segi kualiti dan inovasi serta dapat memenuhi kepuasan pelanggan (Gotzami & Tsiotras, 2002). Kajian-kajian lalu dalam sektor pembuatan menunjukkan bahawa terdapat hubungan yang kuat antara amalan-amalan dalam PKM dengan prestasi syarikat, keuntungan, kepuasan pelanggan dan hubungan antara pekerja (Garvin, 1991).

Mengikut sejarah, pendekatan, konsep, definisi dan teori kualiti adalah diasaskan daripada pembangunan teknologi dalam ketenteraan dan perkembangan perindustrian di Amerika, Eropah dan Jepun (Montgomery, 1997). Pada masa ini PKM telah berkembang sebagai satu pendekatan yang dapat membina budaya pengurusan organisasi cemerlang dan diterima secara meluas dalam perniagaan dan industri (Elmuti, Kathawala, & Manippallil, 1996). Banyak kajian telah dilakukan berkaitan amalan PKM terutamanya di sektor berteraskan pembuatan. Konsep dan pendekatan kualiti yang diamalkan di sektor pembuatan didakwa dapat diterapkan dan digunakan oleh organisasi yang berteraskan perkhidmatan (Berry, 1997). Penyesuaian telah dibuat dalam sektor yang berteraskan perkhidmatan bagi memenuhi keperluan dan sifat perkhidmatan yang lebih kompleks dan unik. Pengaplikasian secara langsung konsep, pendekatan dan teknik-teknik kualiti perlu mengambil kira faktor kontekstual organisasi. Atas keunikan itu, maka kajian yang berterusan perlu dilakukan untuk mengetengahkan dapatan dan ilmu-ilmu baru yang berkaitan dengan kesesuaian dan kebolegunaan amalan pengurusan kualiti dalam sektor perkhidmatan yang lebih spesifik.

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